

Listing of Claims

This listing of claims will replace all prior listings.

Claim 1 (canceled).

Claim 2 (currently amended): The method according to claim ~~12~~ 13, wherein a total of $N =$ four ~~pixels~~ pieces of pixel data, adjacent each other in two rows and two columns ~~on said bitmap image data plane~~ in said bitmap image data, constitute one ~~of the groups~~ pixel-data group.

Claim 3 (currently amended): The method according to claim ~~12~~ 13, wherein a total of $N =$ nine ~~pixels~~ pieces of pixel data, adjacent each other in three rows and three columns ~~on said bitmap image data plane~~ in said bitmap image data, constitute one ~~of the groups~~ pixel-data group.

Claim 4 (currently amended): The method according to claim ~~12~~ 13, wherein a total of $N =$ sixteen ~~pixels~~ pieces of pixel data, adjacent each other in four rows and four columns ~~on said bitmap image data plane~~ in said bitmap image data, constitute one ~~of the groups~~ pixel-data group.

Claim 5 (currently amended): The method according to claim ~~12~~ 13, wherein ~~said groups having the same color~~ the pixel-data groups that are correlated to the lamps of the same color at one timing are partially overlapped ~~on said bitmap image data plane~~ in said bitmap image data.

Claim 6 (currently amended): The method according to claim ~~12~~ 13, wherein ~~said groups having the same color~~ the pixel-data groups that are correlated to the lamps of the same color at one timing do not overlap one another on said bitmap image data plane in said bitmap image data.

Claim 7 (currently amended): The method according to claim ~~12~~ 13, wherein ~~regularity for orderly selecting the first color data, the second color data, and the third color data for the pixels that belong to one first color group, one second color group and one third color group, respectively,~~ the predetermined order for sequentially supplying the gradation values of the N pieces of said pixel data included in one pixel-data group is the same among all pixel-data groups.

Claim 8 (currently amended): The method according to claim ~~12~~ 13, wherein ~~regularity for orderly selecting the first color data, the second color data and the third color data for the pixels that belong to one first color group, one second color group, and one third color group, respectively,~~ the predetermined order for sequentially supplying the gradation values of the N pieces of said pixel data included in one pixel-data group is different among adjacent pixel-data groups.

Claim 9 (currently amended): A display apparatus comprising:
a dot matrix-type display screen section ~~in which~~ including
a multitude of first-color lamps, a multitude of second-color lamps,
and a multitude of third-color lamps ~~are dispersedly arrayed,~~
the lamps of these colors being distributed evenly across said display screen section;

an activating circuit section for individually activating each said lamp ~~said first lamps, said second lamps and said third lamps~~ to emit light at a brightness corresponding to a gradation value for that lamp supplied from a data distribution control section;

an image data storing section for storing bitmap multi-color image data to be displayed on said display screen section, wherein said image data is made of a multitude of pixel data, wherein each piece of said pixel data includes a first-color gradation value, a second-color gradation value, and a third-color gradation value; and

~~a said data distribution control section for distributing and transferring the image data storing section to said activating circuit section;~~ that is configured to carry out processing of:

regarding N pieces of said pixel data adjacent to one another in said image data as one pixel-data group, wherein N is an integer of at least two,

making each piece of said pixel data belong to at least three different pixel-data groups,

correlating one pixel-data group to one first-color lamp; and sequentially supplying, one-by-one according to a predetermined order, the first-color gradation values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one first-color lamp as the first-color gradation value is supplied one-by-one,

correlating another pixel-data group that is adjacent to said one pixel-data group to one second-color lamp that is adjacent to said one first-color lamp; and sequentially

supplying, one-by-one according to a predetermined order, the second-color gradation values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one second-color lamp as the second-color gradation value is supplied one-by-one, and

correlating a further pixel-data group that is adjacent to said one pixel-data group and said another pixel-data group to one third-color lamp that is adjacent to said one first-color lamp and said one second-color lamp; and sequentially supplying, one-by-one according to a predetermined order, the third-color gradation values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one third-color lamp as the third-color gradation value is supplied one-by-one,

wherein, while the gradation value of a certain color in one piece of pixel data is being used for activating a lamp of that color, the gradation values of the other two colors in that piece of pixel data are not used for activating any lamps

~~wherein each pixel on a multi color data plane, which is constructed based on said bitmap multi color image data, is an aggregate made of a piece of first color data for said pixel on a first color data plane, a piece of second color data for said pixel on a second color data plane, and a piece of third color data for said pixel on a third color data plane,~~

~~wherein said data distribution control section is caused to perform~~

~~a grouping step of grouping the multitude of pixels on said first color data plane, said second color data plane, and said third color data plane, respectively, into a multitude of first color groups, a multitude of second color groups, and a multitude of third color groups, respectively,~~

~~wherein each of said first color groups, each of said second color groups, and each of said third color groups, respectively, is made of a plurality of adjacent pixels on said first color data plane, said second color data plane, and said third color data plane, respectively,~~

~~wherein the positional relationship among said first color groups, said second color groups, and said third color groups projected on said multi color data plane corresponds to the positional shift among said first color lamps, said second color lamps, and said third color lamps on said dot matrix type display screen, and~~

~~wherein the positions of the first color group, the second color group, and the third color group that are adjacent to each other on said multi color data plane partially overlap one another,~~

~~a relating step of relating, by one to one correspondence, each of said first color groups, each of said second color groups, and each of said third color groups, respectively, on said first color data plane, said second color data plane, and said third color data plane, respectively, to a different one of said first color lamps, one of said second color lamps, and one of said third color lamps, respectively, on said dot matrix type display screen, and~~

~~a repetitive selecting step of repetitively selecting, from among the plurality of pieces of the first color data, the~~

~~second color data, and the third color data, respectively, for the plurality of pixels that belong to one first color group, one second color group, and one third color group, respectively, a piece of the first color data, a piece of the second color data, and a piece of the third color data, respectively, pixel by pixel at high speed according to a predetermined order, wherein said activating circuit section is caused to perform an activating step of:~~

~~activating the first color lamp, the second color lamp, and the third color lamp, respectively, that is related to said one first color group, said one second color group, and said one third color group, respectively, according to said piece of the first color data, said piece of the second color data, and said piece of the third color data, respectively, that has been selected, and~~

~~wherein said repetitive selecting step and said activating step are carried out for all of the first, second, and third color groups.~~

Claims 10-12 (canceled).

Claim 13 (new): A display method comprising the steps of:

preparing a dot matrix-type display screen section including a multitude of first-color lamps, a multitude of second-color lamps,

and a multitude of third-color lamps, the lamps of these colors being distributed evenly across said display screen section;

preparing an activating circuit section for individually activating each said lamp to emit light at a brightness corresponding to a gradation value for that lamp;

preparing bitmap multi-color image data to be displayed on

said display screen section, wherein said image data is made of a multitude of pixel data, wherein each piece of said pixel data includes a first-color gradation value, a second-color gradation value, and a third-color gradation value;

regarding N pieces of said pixel data adjacent to one another in said image data as one pixel-data group, wherein N is an integer of at least two;

making each piece of said pixel data belong to at least three different pixel-data groups;

correlating one pixel-data group to one first-color lamp; and sequentially supplying, one-by-one according to a predetermined order, the first-color gradation values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one first-color lamp as the first-color gradation value is supplied one-by-one;

correlating another pixel-data group that is adjacent to said one pixel-data group to one second-color lamp that is adjacent to said one first-color lamp; and sequentially supplying, one-by-one according to a predetermined order, the second-color gradation values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one second-color lamp as the second-color gradation value is supplied one-by-one; and

correlating a further pixel-data group that is adjacent to said one pixel-data group and said another pixel-data group to one third-color lamp that is adjacent to said one first-color lamp and said one second-color lamp; and sequentially supplying, one-by-one according to a predetermined order, the third-color gradation

values of the N pieces of said pixel data included in that pixel-data group to said activating circuit section to make said activating circuit section activate said one third-color lamp as the third-color gradation value is supplied one-by-one;

wherein, while the gradation value of a certain color in one piece of pixel data is being used for activating a lamp of that color, the gradation values of the other two colors in that piece of pixel data are not used for activating any lamps.